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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,788	10/30/2003	Shufeng Han	16569-US	8112
30689	7590	04/27/2006	EXAMINER	
DEERE & COMPANY ONE JOHN DEERE PLACE MOLINE, IL 61265			HUGHES, DEANDRA M	
			ART UNIT	PAPER NUMBER
			3663	

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/696,788	<b>Applicant(s)</b> HAN ET AL.	
	<b>Examiner</b> Deandra M. Hughes	<b>Art Unit</b> 3663	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. The amendment filed 3/6/06 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller (US 6,463,374 published Oct. 18, 2002) in view of Staub (US 6,236,916 published May 22, 2001).

With regard to claim 1, Keller discloses a method of guiding a vehicle, the method comprising:

- establishing elevation data and corresponding location data for a work area (fig. 7, ELEVATION; col. 30, lines 33-42; col. 10, line 35);
- determining location data, including a particular location of a vehicle, within the work area (col. 9, lines 49-50);
- estimating at least one of roll data and pitch data corresponding to the particular location (col. 10, lines 44-45; note: 3 elevation parameters);
- guiding the vehicle based upon at least one of the estimated roll data, the pitch data, and an aspect such that the vehicle follows a target path (the

entire patent of Keller is directed towards this end; further, see col. 3, lines 5-16 and col. 10, lines 44-45).

Keller does not specifically disclose that the vehicle is guided based upon an aspect which represents a direction of maximum slope corresponding to a particular location. However, Staub teaches guiding a vehicle according to a maximum slope corresponding to a particular location (fig. 4 and col. 4, lines 45-60). It would have been obvious to one of ordinary skill (e.g., an optical engineer) in the art at the time the invention was made to guide the vehicle according to an aspect that represents the direction of maximum slope corresponding to a particular location for the advantage of reducing roll of the agricultural vehicle, as is specifically taught by Staub (col. 4, line 50-56).

With regard to claims 2, 4, and 7-10, Keller discloses the roll data comprises a roll angle and wherein the pitch data comprises a pitch angle (slope is an angle; col. 10, lines 44-45).

With regard to claim 3, figure 3 discloses a group of cells.

With regard to claim 5, the Examiner considers each path segment disclosed in figure 3 to be substantially linear.

With regard to claim 6, col. 6, lines 47-55 disclose steering compensation of the target path via steering compensation data.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Objections***

5. Claims 11-20 have been withdrawn from consideration due to a Restriction Requirement. It appears that the claim amendment filed 3/6/06 is missing claims 19-20. Since these claims have been withdrawn, this does not present a problem in the examination of the application. However, please note that these claims are now missing from the prosecution history.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M. Hughes whose telephone number is 571-272-6982. The examiner can normally be reached on M-F, 8:30am-5:00pm.

Art Unit: 3663

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deandra M Hughes  
Primary Examiner  
Art Unit 3663